Department of Chemistry & Physics

PHYS 2510 General Analytical Physics
Textbook Physics For Engineers And Scientists, 3*rd Edition, Vol.1 Ohanian and Markert*

Course Content

This course is calculus-based introduction to mechanics, oscillations, and wave motion. Material covered: Part I (chapters 1-14) and Part II (chapters 15-18) in the textbook. Due to the limited time, Part II is optional. It will be covered partially depending on our progress in part I.

Course Goals

Students will learn the fundamental laws of Newtonian mechanics, oscillations, wave motion, and how to apply them to simple systems. Students will acquire the skills of solving physics problems: theory, formulas, graphical and numerical results. Students will acquire the inestimable skills of understanding simple natural physical situations, attempt to model them and draw conclusions from these works.

Course Objectives

The student who successfully completes this course should be able: to analyze situations involving Newton's laws, vector analysis, energy conservation laws, to demonstrate the understanding of mechanics, to apply the principles of the fundamental laws of Newtonian mechanics, oscillations, wave motion to real problems.

Tests and the final exam

There will be three one-hour sectional tests in class during the semester (T1, T2 and T3). Each test will contain 3-5 problems including theoretical questions but requesting also a final algebraic and numerical result. You can use calculators, pencil, and scratch paper. No books, formula sheets, notes, cell phones, PDA, computer portable memories, etc., are allowed. Some formulas may be provided. For difficult mathematical procedures, indications will be given. Each test is self-consistent and each question will contain enough information to let you solve it. Makeup tests will be given only for valid written official excuses, only in very special situations, and will be in a different format.

The final exam will be comprehensive. The exam format will be the same as the sectional tests, except you will have more problems. About 75% of the material in this final test may be selected from materials you have been tested on before. There is no make-up (earlier or later) for the final test, except early graduating seniors.

It is the policy of NSU to accommodate students with disabilities, pursuant to federal law, state law, and the University's commitment to equal educational opportunities. Any student with a disability who needs accommodations, for example in seating placement or in arrangements for examinations, should inform the instructor at the beginning of the course. Students with disabilities are encouraged to contact the Office of Disability Support, which is located in Kyser Hall, Room 239, telephone (318)357-4460 or TTD (318)357-4393.